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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/814,367	03/21/2001	Yasutaka Kotani	450100-03071	3915

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EXAMINER	
GREY, CHRISTOPHER	
ART UNIT	PAPER NUMBER
2667	

DATE MAILED: 11/19/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	09/814,367	KOTANI ET AL.	
	Examiner	Art Unit	
	Christopher P Grey	2667	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *21 March 2001*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-9* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☐ Claim(s) *1-9* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☒ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

1. Claims 1, 2, 3, 5, 6, 8 rejected under 35 U.S.C. 103(a) as being unpatentable over Ishikawa (US 6219357) in view of Nakamura (US 6393082)

Claim 1, 5, 8 Ishikawa discloses a method/apparatus for time division multiplexing (Col 6 line 41-44) a plurality of channels of data concerning a video signal (disclosed in Col 1 lines 12-20 and Col 2 lines 19-29). Ishikawa further discloses the insertion of a bit string containing n bits (beginning information) within the channel that are used for channel identification before multiplexing occurs (Col 2 lines 19-29). The bit string containing n bits is considered identification/synchronization bits (Col 3 lines 53-63). Ishikawa discloses a decoder that decodes the identification/synchronization bits and indicates the decoding through the output of a flag. After being decoded, the transmitted signal forwarded into a character synchronization circuit that allows for the identification of each channel based on the synchronization bits. Ishikawa does not disclose the bit string obtained by decoding differing by at least two bits from two types of bit strings obtained by decoding, two types of information indicating the beginning of

a plurality of pieces of data concerning a second video signal, when the number of corresponding bits is maximum.

Nakamura discloses a signal synchronization detecting circuit that receives data bit groups consisting of predetermined bits. One skilled in the art can appreciate that these groups are possibly a plurality of pieces of data. The signal synchronization circuit detects a delimiter bit group (beginning information) and includes a converter for serial to parallel converting based on the result of detection (disclosed in Col 3 lines 30-45). Nakamura discloses a comma signal that is a delimiter bit group (predetermined number of continuing bits) that is included at the heading (beginning information) of the data bits (Col 1 lines 13-30). Fig 1A and 1B depict the bit patterns (max of 10 bits is depicted) of possible comma signals. Both bit patterns clearly differ by more than 2 bits.

It would have been obvious to one of the ordinary skill in the art at the time of the invention to combine the method and apparatus for time division multiplexing and the adding of beginning information as disclosed by Ishikawa with the signal synchronization detecting circuit disclosed by Nakaruma. The motivation for this combination is evident as the basis of Nakamura's invention is a signal synchronization detecting circuit, which is a major component in the method of Ishikawa (see element 9 in Fig 1), resulting in accurate bit string detection of header group bits. Further motivation for combination is to clearly distinguish between two different signals, hence delimiting the data bit groups from one another (abstract of Nakaruma).

Claim 2, 3, 6 Ishikawa fails to disclose a difference between the number of bits indicating 1 and the number of bits indicating 0 in the beginning information being equal to a difference between the number of bits indicating 1 and the number of bits indicating 0, respectively, in the two types of information indicating the beginning of a plurality of pieces of data concerning the second video signal.

Nakamura discloses 2 bit patterns of beginning information in Figs 1A and 1B. These two bit patterns differ by more than 2 bits and one skilled in the art can appreciate that the difference in the number of bits indicating 1 and the number of bits indicating 0 in Fig 1A is equal to the difference in the number of bits indicating 0 and the number of bits indicating 1 in Fig 1B. Particularly, fig 1A indicates the bit pattern of the beginning information 1010000011 and fig 1B indicates the inverted pattern 0101111100 (Col 1 lines 13-30 and Col 5 lines 55-63).

Therefore it would have been obvious to one of the ordinary skill in the art at the time of the invention to use the method of time division multiplexing including the synchronization bit detection provided by Ishikawa in combination with the signal synchronization detecting method provided by Nakamura. The result of the combination of both methods would provide the time division multiplexing of a channel/signal that has had synchronization bits added, furthermore, decoding the synchronization bits and using a detector to distinguish between synchronization bits of 2 different kinds of signals by 2 or more bits. The motivation for this combination is evident as the basis of Nakamura's invention is a signal synchronization detecting circuit, which is a major

component in the method of Ishikawa (see element 9 in Fig 1), resulting in accurate bit string detection of header group bits.

2. Claims 4, 7, 9 rejected under 35 U.S.C. 103(a) as being unpatentable over Ishikawa (US 6219357) in view of Nakamura (US 6393082) in further view of Takahashi (US 4520401)

Claim 4 Ishikawa and Nakamura disclose all of the limitations of claim 4, but fail to disclose the first video signal being one of a high-definition video signal and the second video signal being one of a standard-definition video signal.

Takahashi et al (Takahashi 'hereinafter') discloses a system for digital video recording that divides a signal into different picture element groups, adding a header signal (beginning information) that is constituted by a synchronization signal to the data groups (Col 3 lines66-Col4 line24). The header information contains identification information defining high definition or a moving picture in accordance with a run length code (standard definition)(Col 4 lines 25-56).

It would have been obvious to one of the ordinary skill in the art at the time of the invention to combine the motivation from claim 1 with the time division multiplexing of possible high definition or standard definition signals as disclosed by Takahashi. The motivation for this combination is to distinguish between two signal, particularly high definition and standard definition.

Claim 7 Ishikawa and Nakamura disclose all of the limitations of claim 9, but fail to disclose the first piece of data including video and audio data, and the second piece of data including sub-code data.

Takahashi discloses a digital video signal obtained by subjecting an audio and video signal to pulse code modulation (Col 1 lines 24-62). Takahashi discloses the digital video signal being divided into picture element groups and a header being added afterwards (Col 3 line 66- Col 4 line 24). One skilled in the art can appreciate a picture element group being one distinguishing audio/video or sub-code.

It would have been obvious to one of the ordinary skill in the art at the time of the invention to combine the motivation from claim 5 with the addition of headers defining different picture element groups as disclosed by Takahashi. The motivation for this combination is to distinguish between different picture element groups (audio and video or sub-code) via a header (beginning information).

Claim 9 Ishikawa and Nakamura disclose all of the limitations of claim 9, but fail to disclose a recording medium having a computer readable program recorded thereon. Takahashi discloses a digital video signal recording system and reproducing apparatus (Col 3 lines 60-65).

Therefore it would have been obvious to one skilled in the art at the time of the invention to combine the motivation applied to claims 1, 2, 3, 5, 6, 8 with the invention disclosed by Takahashi, who discloses a digital video signal recording system, where

there is a synchronization signal being inserted as beginning information, and there is a need for the distinguishing between digital video signal of different header data groups.

3. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Christopher P Grey whose telephone number is (571)272-3160. The examiner can normally be reached on 6:30-3:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Chi Pham can be reached on (571)272-3179. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Christopher Grey
Examiner
Art Unit 2667
CPG 11/10/04

AFSAR QURESHI 11/12/04
PATENT EXAMINER